

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**In re U.S. Patent Application of** )  
 )  
**INABA, ET AL.** )  
 )  
**Application Number: To be Assigned** )  
 )  
**Filed: April 3, 2006** )  
 )  
**For: STRETCH-FORMED MULTILAYER CONTAINER** )  
**AND PRODUCTION PROCESS FOR THE SAME** )  
 )  
**ATTORNEY DOCKET NO. 358275.20027** )

**ENGLISH TRANSLATION OF CLAIMS AS AMENDED  
PURSUANT TO ARTICLE 34**

**Mail Stop Patent Application**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**CLAIMS**

1. (Amended) A stretched-formed multilayer container formed by stretching a multilayer sheet or a multilayer preform from 1.1 to 100 times its area draw ratio, said multilayer sheet or  
5 said multilayer preform comprising a layer (a) made of a thermoplastic resin (A) and at least one layer unit of a (bc)/(de) layer unit or a (de)/(bc) layer unit which is arranged on at least one surface of layer (a) with or without an adhesive backing, said (bc)/(de) layer unit or said (de)/(bc) layer unit  
10 consisting of a layer (bc) made of a mixture of a polycarboxylic acid-based polymer (B) and a plasticiser (C) and a layer (de) made of a mixture of a bivalent metal compound (D) and a resin (E), said layer (bc) and said layer (de) being adjacent to each other, and , said multilayer sheet or said multilayer preform  
15 containing a bivalent metal compound (D) so that the chemical equivalent of a bivalent metal in the total amount (Dt) of the bivalent metal compound (D) is 0.2 or more relative to the total amount (Bt) of carboxyl groups contained in the layers (bc) and (de) .
- 20 2. (cancellation of claims )
3. The stretched-formed multilayer container according to claim 1, containing at least one a (de)/(bc)/(de) layer unit, which has the layer (bc) and the layer (de) adjacent to each other.
- 25 4. (cancellation of claims )
5. (cancellation of claims )

6. The stretched-formed multilayer container according to one of claims 1 to 5,

wherein the mixing ratio between the polycarboxylic acid-based polymer (B) and the plasticiser (C) is 70/30 to 99.9/0.1 (mass ratio).

7. The stretched-formed multilayer container according to one of claims 1 to 6,

wherein the polycarboxylic acid-based polymer (B) has an oxygen permeability coefficient of  $1000\text{cm}^3 (\text{STP}) \cdot \mu\text{m}/(\text{m}^2 \cdot \text{day} \cdot \text{Mpa})$  or less at  $30^\circ\text{C}$  and relative humidity of 0% when formed into a film by itself.

8. The stretched-formed multilayer container according to one of claims 1 to 7,

wherein the polycarboxylic acid-based polymer (B) is a homopolymer, a copolymer and/or a mixture thereof, the homopolymer and the copolymer consisting of at least one of polymerizable monomer units selected from acrylic acid, maleic acid and methacrylic acid.

9. (cancellation of claims )

10. (Amended) The stretched-formed multilayer container according to one of claims 1 to 9, which is used for boiling or retort sterilization.

11. A multilayer preform used for the stretched-formed multilayer container according to one of claims 1 to 9.

12. (Amended) A multilayer sheet used for the stretched-formed multilayer container according to one of

claims 1 to 9.

13. (Amended) A production method of a stretch-formed multilayer container,

wherein a multilayer sheet or a multilayer preform  
5 obtained by forming at least one a (bc)/(de) layer unit or a  
(de)/(bc) layer unit on a layer (a) made of a thermoplastic resin  
(A) by a coating method is stretched from 1.1 to 100 times its  
area draw ratio, said (bc)/(de) layer unit or said (de)/(bc)  
layer unit consisting of a layer (bc) made of a mixture of a  
10 polycarboxylic acid-based polymer (B) and a plasticiser (C) and  
a layer (de) made of a mixture of a multivalent metal compound  
(D) and a resin (E), said layer (bc) and said layer (de) adjacent  
to each other.

14. (cancellation of claims )

15. The production method according to claim 13,

wherein at least one a (de)/(bc)/(de) layer unit, which  
has the layer (bc) and the layer (de) adjacent to each other,  
is provided.

16. The production method according to one of claims 13 to  
20 15,

wherein in all of the layer (bc) and the layer (de), the  
chemical equivalent of the multivalent metal in the total amount  
(Dt) of the multivalent metal compound (D) is 0.2 or more  
relative to the total amount (Bt) of carboxyl groups contained  
25 in the layer (bc) and the layer (de).

17. The production method according to one of claims 13 to

16,

wherein the mixing ratio between the polycarboxylic acid-based polymer (B) and the plasticiser (C) is 70/30 to 99.9/0.1 (mass ratio).

5 18. The production method according to one of claims 13 to 17,

wherein the polycarboxylic acid-based polymer (B) has an oxygen permeability coefficient of  $1000\text{cm}^3 (\text{STP}) \cdot \mu\text{m}/(\text{m}^2 \cdot \text{day} \cdot \text{Mpa})$  or less at  $30^\circ\text{C}$  and relative humidity of 0% when formed  
10 into a film by itself.

19. The production method according to one of claims 13 to 18, wherein the polycarboxylic acid-based polymer (B) is a homopolymer, a copolymer and/or a mixture thereof, the homopolymer and the copolymer consisting of at least one of  
15 polymerizable monomer units selected from acrylic acid, maleic acid and methacrylic acid.

20. (Amended) The production method according to one of claims 13 to 19,

wherein the multivalent metal compound (D) is a bivalent  
20 metal compound.